



Improving Educational Outcomes for American Indian Children: Community and Family Influences on Rural Student Academic Success

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The program

An Investing in Innovations (I3) Validation Grant was awarded to Parents as Teachers in 2010. A significant focus of this five-year grant is the required conduct of an independent evaluation intended to provide further scientific evidence of the program's success. The evaluation of Validation Grant requires that experimental and/or quasi-experimental evidence be obtained during the implementation of the grant. It also requires a related evaluation of the fidelity of implementation of the program.

The program being implemented is the Parents as Teachers (PAT) home visiting model which provides the following to approximately 850 families in 22 American Indian communities: personal visits, monthly Family Circles (group connections), health and developmental screenings, and resources and referrals. In addition to the standard PAT model, 100 children's books are scheduled to be delivered to support home literacy, and Native language and culture are expected to receive special emphasis and support. The program is named BabyFACE. It is very similar to the PAT model delivered in the Bureau of Indian Education's (BIE) long-running Family and Child Education (FACE) program.

Program implementation began in May, 2011 and will end in May, 2015. Data collection will not be completed until June, 2015. Therefore, there are no outcomes to report at this point. There are however, lessons learned to report regarding fidelity of program implementation and research methodology, challenges, and solutions.

Ecological variables that influence students' education

The Parents as Teachers model is based on belief, knowledge, and subsequent validation through research, that parents are a child's best and most influential teacher. By becoming an effective and involved teacher, their child is more likely to enter school ready to learn. Findings from two Impact Studies indicate that the PAT model, as provided in BIE schools over the past 20 years, indirectly impacts children's school readiness

through its direct, significant, and meaningful impacts on preschool attendance, the number of books and literacy resources in the home, and increased home literacy activity. Findings from a longitudinal follow-up of kindergartners in BIE schools demonstrated that school readiness is a large predictor of 3rd grade reading achievement. The frequency that parents read to their child *prior to kindergarten* also continues to significantly predict 3rd grade reading achievement.

Definition of rural in this grant and research

All of the 22 programs are in BIE-funded schools. All of them meet the criteria outlined in the Small Rural School Achievement (SRSA) or Rural and Low-Income School (RLIS) program: geographic remoteness, high level of poverty, and daily attendance at all schools served by the LEA is fewer than 600. Other salient variables for the rural AI reservation context are: dispersion across many state bureaucracies; limited employment opportunities; high percentages of mothers with less than a high school education; higher percentages of single-parent households; and limited access to literacy resources in the community and in the homes.

Methods used in identifying, defining, and measuring the effects of community and family influences on school readiness

Confirmatory research questions in this project are: 1) What is the effect on children's cognitive development at age 3 years as measured by the Boehm-3, compared to children who did not have access to the program? 2) What is the effect on children's socio-emotional development at age 2 years and at age 3 years, as measured by the Devereaux Early Childhood Assessment (DECA) total score, compared to children who did not have access to the program?

Exploratory research questions are: 1) What is the effect on the number of books in the home and the frequency of home literacy activities when children are 3 years of age, compared to children who did not have access to the program? 2) What is the effect on protective factors in the home environment when children are 3 years of age compared to children who did not have access to the program?

I3 Validation Grants require that experimental and/or quasi-experimental evidence be obtained during the implementation. Therefore the following combination of designs is being implemented. A quasi-experimental design uses a matched comparison group comprised of non-participating children born a year prior to participating children. An experimental design is being used at one large site with a population of children born within a designated range of birthdates that exceeds the BabyFACE program's capacity to serve. At this site children were randomly selected for participation.

Challenges and solutions associated with this research

Permission to conduct research

Originally there were issues associated with tribal sovereignty vs. federal government oversight. This was particularly significant around tribal Institutional Review Boards and tribal authority to participate or not participate in research & evaluation. Therefore, it was required that all personnel on the project were school employees, and that signatures of understanding and agreement were acquired from each treatment and comparison family.

Careful identification of participants and non-participants

This was key to providing the required quasi-experimental study. The major criticism of non-experimental studies (all prior evaluations of the model within BIE schools fall into that category) is that participants are self-

selected into the treatment condition and are differentially motivated to succeed even prior to participation in the program. Demonstrations of program effectiveness are thereby compromised by the self-selection process. Therefore, the following research design was developed: participants are those families with child born in the January 1, 2011 thru March 31, 2012 time period (approximately 850 children), and comparison group members are those families with a child born in 2010 who are not receiving similar other home-based services (approximately 400 children).

Recruitment and retention of participants

In a multi-year intervention this was a significant challenge. During recruitment, the parameters for participant families meant that families eager for services had to be turned away, creating some “ill-will” in the community. That required parent educators to be diplomatic and to explain the hope that the grant research would produce future funding which would make services available to more families. A major difficulty around retention was that it is not uncommon for families to leave these extremely rural communities for periods of time in order to find work or pursue educational opportunities. Therefore, it was necessary to develop incentives and systems for maintaining contact.

Identification and recruitment of comparison families

This required strategizing. Individual communities were helped to consider their community resources and specific recruitment strategies. Financial incentives were used to collect the baseline information as well as subsequent data collections.

Dosage challenges

The PAT quality standard for dosage is 24 personal visits per year. This is extremely difficult to provide in an area where families are often very difficult to reach, literally. Most are geographically isolated, and many homes are inaccessible during various weather and road conditions. Also, a significant number of families move out of the area, for months at a time, in order to seek work or further education.

Identification and training of qualified site-based staff for data collection

There was limited availability of qualified site-based staff for data collection. It required significant effort for the schools to identify an appropriate person and then get them approved by their school board. Then training was effectively provided by phone.

Meeting the What Work Clearinghouse requirements

Each i3 evaluation is required to provide results on fidelity of implementation (FOI) to meet the i3 performance measure for producing “high-quality implementation data.” This FOI measure was based on a comprehensive logic model for all components of the Parents as Teachers model with the addition of components specific to the BabyFACE program intervention. A system for measuring the fidelity of implementation of this program/intervention that assesses the extent to which all of the inputs/outputs are being implemented as planned was developed.

Next steps needed to advance research

Acquire funding needed to evaluate school readiness when the participant children reach kindergarten.